

I CLAIM:

- 5 1. A valve for liquid separation, especially for analytical or preparative liquid chromatography, comprising a valve body having an inlet and at least two outlets, a sealing element coupled with the inlet and outlet, the sealing element including shut-off surfaces for alternately shutting off the outlets, the shut-off surfaces including a segment shaped as a segment of one of a cone and sphere, the shut-off surfaces respectively associated with the outlets being arranged to face away from each other.
2. The valve of claim 1 wherein the shut-off surfaces are radially symmetrical to an actuation axis of an actuator for the sealing element.
3. The valve of claim 2 wherein the actuator includes a valve tappet connected to the sealing element.
4. The valve of claim 2 wherein the sealing element is at a free end of the actuator.
5. The valve of claim 3 wherein a cross-section of the shut-off surfaces and surface parts of the sealing element opposite the inlet form an essentially continuous line.
6. The valve of claim 1 wherein the outlets and sealing element are arranged so that when one of the outlets is shut off, the sealing element with its shut-off surface associated with its respective outlet rests on opposing shut-off surfaces of a valve seat of the valve body to form an annular sealing surface.
7. The valve of claim 5 wherein the opposing shut-off surfaces form an angle having an actuation axis at the annular sealing surface that is greater than or equal to 15°.
8. The valve of claim 7 wherein the angle is at least 30°.
9. The valve of claim 6 wherein the opposing shut-off surface of the valve seat includes material that is softer and more elastic than the shut-off surfaces of the sealing

elements.

10. The valve of claim 9 wherein the valve seat material is TEFLON.

11. The valve of claim 6 wherein the opposing shut-off surfaces have a step or nose-shaped projection at the annular sealing surfaces.

12. The valve of claim 6 wherein the opposing shut-off surface of the valve body narrows conically or as a funnel toward at least one of the outlets.

13. The valve of claim 12 wherein the opposing shut-off surface opposes the free end of the actuator.

14. The valve of claim 1 wherein the outlets on both sides of the inlet oppose each other.

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